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EXAMINER

LEFLORE, LAUREL E

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,945

Applicant(s)

GETTEMY ET AL.

Examiner

Laurel E LeFlore

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 13 and 26-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Lebby et al. 6,115,618 in view of Branson 2003/0071832 A1.

In regard to claim 1, Lebby discloses a display system for a handheld computing device. See column 1, lines 56-58, disclosing, "It is also a purpose of the present invention to provide for a portable electronic device with a removable or detachable display." The display system comprises a processing unit having a first communication port and a visual display unit separable from the processing unit. See column 2, lines 47-49, and figure 2, "illustrating the attachment of a display and battery combination 12 positioned on portable electronic device 10." Further see figure 4, depicting a controller 52 within portable electronic device 10. This controller is understood to be a processor. Thus, the processing unit is portable electronic device 10 and the visual display unit is display 24 of display and battery combination 12. See figure 1 and column 3, lines 2-3, disclosing, "there is provided a wireless communication port 29". Note in figure 1 that wireless communication port 29 is provided on the processing unit, portable electronic device 10.

The visual display unit includes a visual display and a second communication port, the first communication port providing communication with the second communication port. See column 3, lines 35-37, disclosing, "display 24 may include a wireless connection so as to be in communication interface with portable electronic device 10."

Lebby does not disclose that the display system can be expanded from an initial or storage state to present a larger visual display size.

Branson discloses a display system that can be expanded from an initial or storage state to present a larger visual display size. Branson teaches in paragraph [0004] that "displays which are flexible in nature and thus able to be folded have been developed." Further, in paragraph [0005], Branson teaches, "A foldable display device is configured to fold in a similar manner as a wallet. In this manner, when the device is being carried around by a user, it may easily fit into the user's shirt or jacket pocket. When in use, the user may unfold the display device such that the display screen size of the device is many times larger than the folded size."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the invention of Lebby with the invention of Branson by having the display of Lebby expand from an initial or storage state to present a larger visual display size, as in the invention of Branson. One would have been motivated to make such a change based on the teaching of Branson

that foldable, flexible displays have been developed, offering a small size for portability and a large display screen size for use.

3. In regard to claim 2, see rejection of claim 1.
4. In regard to claim 3, see rejection of claim 1. Folding the display is a retracting mechanism.
5. In regard to claim 4, Lebby discloses a support apparatus to anchor and support the visual display unit while it is in use. See rejection of claim 1. Note in figures 2 and 3 that portable electronic device 10 is a support and anchor for display 24. Also, display 24 can be used while anchored to electronic device 10. See column 3, lines 61-65, disclosing, "During operation, a user of portable electronic device 10 having positioned on a rear surface of first major portion 14 [note in figure 2 that element 14 is on the portable electronic device 10] display and battery combination 12, is able to control a contained virtual image display".
6. In regard to claim 5, Lebby discloses that the first communication port is housed in a first connection housing attached to the processing unit that mates with the second communication port housed in a second connection housing attached to the visual display unit. See rejection of claims 1. The first communication port, wireless communication port 29 of the processing unit, is housed within the connection housing that is portable electronic device 10. This connection housing is attached to the visual display unit (see figure 2 and 3 and claim 4 rejection). The second connection housing is the display battery combination 12, which houses the second communication port, the wireless connection of display

24. The two wireless communication connections are in communication with each other, and are thus mated with each other.
7. In regard to claim 6, see rejections of claims 4 and 5.
8. In regard to claim 13, Lebby discloses that the first and second communication ports include wireless transceivers. See rejection of claim 1, disclosing that the communication connections are wireless. Further see figure 4, depicting the transceiver 50 of portable electronic device 10. The second transceiver is inherent.
9. In regard to claim 26, Lebby in view of Branson discloses a visual display unit for a handheld computing device comprising: a microprocessor, a storage system, and a visual display, wherein the visual display unit can be expanded from a compact storage state. See rejection of claim 1. Further, the controller of Lebby is understood to be a microprocessor because it is sized for a portable device. Note memory 54 in figure 4 of Lebby. This is understood to be a storage system.
10. In regard to claim 27, Lebby discloses that the visual display unit includes an apparatus for navigating information stored on the storage system. See figures 2 and 3 and column 3, lines 64-65, disclosing "function control buttons 28". Further see column 4, lines 1-2, disclosing, "Each individual button 28 is interfaced with cursor electronics" and lines 37-39, disclosing, "memory 54 stores a plurality of cursor manipulation functions for controlling the cursor in the virtual image

display 24.” Thus, the buttons 28 are an apparatus for navigating information (cursor manipulation functions) stored on the storage system (memory 54).

11. In regard to claims 28-30, see rejection of claim 1.
12. Claims 1, 7, 10-12, 16-20 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliwa et al. 4,856,088 in view of Branson 2003/0071832 A1.

In regard to claims 1 and 16, Oliwa discloses a handheld computing device and a visual display unit detachable from the handheld computing device. See column 2, lines 14-17, disclosing “a portable type radio transceiver 10 having...a removable display module 12”. The device comprises a processor and an information storage system. See figure 2, depicting display controller 42 and memory 48. Display controller 42 is understood to be a processor, as it processes information from all the other components of the transceiver, and memory 48 is an information storage system. A radio transceiver is understood to be a computing device as it sends and receives information and includes processing capability and a memory.

Oliwa further discloses a first communications port attached to the handheld computing device and that the visual display unit includes a visual display and a second communication port. See column 2, lines 34-38, disclosing, “On the rear of the display module 12 are electrical contacts corresponding to the contacts 22, 24, 26, 28 of the transceiver 10 through which electrical signals may be passed”. These two sets of electrical contacts are

understood to be the first and second communication ports, as they are used for communication between the display and transceiver.

Oliwa does not disclose that the visual display unit can be expanded from a compact state.

Branson discloses a display system that can be expanded from an initial or storage state to present a larger visual display size. Branson teaches in paragraph [0004] that “displays which are flexible in nature and thus able to be folded have been developed.” Further, in paragraph [0005], Branson teaches, “A foldable display device is configured to fold in a similar manner as a wallet. In this manner, when the device is being carried around by a user, it may easily fit into the user’s shirt or jacket pocket. When in use, the user may unfold the display device such that the display screen size of the device is many times larger than the folded size.”

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the invention of Oliwa with the invention of Branson by having the display of Oliwa expand from an initial or storage state to present a larger visual display size, as in the invention of Branson. One would have been motivated to make such a change based on the teaching of Branson that foldable, flexible displays have been developed, offering a small size for portability and a large display screen size for use.

13. In regard to claim 7, Oliwa discloses that visual display unit displays data uploaded from the processing unit while the visual display unit is separated from

the processing unit. See column 2, lines 63-66, disclosing, "The display module comprises a display 32 and a memory 50 which stores a message or other data to be displayed when the display module 12 is removed from the radio 10."

Further see column 3, lines 51-52, disclosing radio display data coupled from memory 48 into memory 50 and lines 58-59, disclosing, "the updated contents of memory 48 are copied into memory 50".

14. In regard to claim 10, Oliwa discloses that the visual display unit includes a power source to power the visual display unit to display data while the visual display unit is separated from the processing unit. See column 3, lines 2-5, disclosing, "A low capacity rechargeable power source 54 is provided within the display module 12 for providing power to the circuitry and display of the module when the module is disconnected from the radio."
15. In regard to claim 11, Oliwa discloses that the visual display unit includes memory and a microprocessor to store and retrieve data uploaded from the processing unit. See figure 2, depicting control circuitry 52 and memory 50 within display 12. Control circuitry 52 is understood to be a processor as it (see column 2, line 67 to column 3, line 1) "controls the display in a conventional manner and also provides a coupling to the control buttons 34, 36, 38 in a conventional manner." It is understood to be a microprocessor, since it is sized for a portable device. Further see column 3, lines 46-48, disclosing, "the display may be used to display messages or radio display data stored within the memory 50" and lines 58-59, disclosing, "the updated contents of memory 48 are copied into memory

50". Thus, the visual display memory 50 stores and retrieves data uploaded from the processing unit. Also note in figure 2 that the control circuitry 52 is linked to memory 50.

16. In regard to claim 17, Oliwa discloses that the visual display unit includes random access memory and a second processor. See figure 2, depicting control circuitry 52 and memory 50 within display 12. See column 3, lines 46-48, disclosing, "the display may be used to display messages or radio display data stored within the memory 50" and lines 58-59, disclosing, "the updated contents of memory 48 are copied into memory 50". Thus, memory 50 is random access memory, as information can be copied into and retrieved from memory 50. Control circuitry 52 is understood to be a processor as it (see column 2, line 67 to column 3, line 1) "controls the display in a conventional manner and also provides a coupling to the control buttons 34, 36, 38 in a conventional manner."
17. In regard to claim 18, Oliwa discloses that the second processor can access information stored on the random access memory for display on the visual display. See column 3, lines 46-52, disclosing, "the display may be used to display messages or radio display data stored within the memory 50 in the display module. External controls 34, 36, 38 allow...the display of radio data...since the radio display data has been couple...into memory 50." Note in figure 2 that control circuitry 52 (the second processor) is the link between external controls 34, 36, 38 and memory 50. Thus, the external controls allow

the display of the memory contents when the second processor accesses this information.

18. In regard to claims 12 and 19, Oliwa discloses that the visual display unit includes a navigation apparatus to instruct the processing unit to access information in the random access memory for display on the visual display. See rejection of claim 18. External controls 34, 36, 38 are a navigation apparatus. Note in figure 1 that external controls 34, 36, 38 are buttons.
19. In regard to claim 20, Oliwa discloses that information is displayed on the visual display while the display unit is detached from the handheld computing device. See column 2, lines 63-65, disclosing, "The display module 12 comprises a display 32 and a memory 50 which stores a message or other data to be displayed when the display module 12 is removed from the radio 10."
20. In regard to claim 22, see rejection of claim 10.
21. In regard to claim 23, see rejection of claim 16.
22. In regard to claim 24, Oliwa discloses that the handheld computing device includes a storage means for the visual display unit in the compact state. See rejection of claim 16, disclosing a compact state. Further see column 1, lines 14-17, disclosing "a portable type radio transceiver 10 having an enclosure 11 for containing...a removable display module 12". This enclosure 11 is a storage means for the visual display unit, removable display module 12.
23. In regard to claim 25, Oliwa discloses that the handheld computing device includes a mechanism to anchor and support the visual display unit in the

expanded state. See rejection of claim 16, disclosing an expanded state.

Further see rejection of claim 24. Radio transceiver 10 has enclosure 11, within which the visual display is anchored and supported. Further see column 2, lines 22-26, disclosing "in the enclosure 11...one or more contacts 22, 24, 26 are mounted. Behind one or more of these contacts are magnets which will be used to secure the display module to the enclosure 11".

24. Claims 8, 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliwa et al. 4,856,088 in view of Branson 2003/0071832 A1 as applied to claims 1 and 16 above, and further in view of "A Comparison of Display Technologies for E-Books" by Dr. J. William Doane.

In regard to claims 8 and 9, Oliwa in view of Branson discloses an invention similar to that which is disclosed in claims 8 and 9. See rejection of claim 1 for similarities. Oliwa in view of Branson does not disclose that the visual display unit includes a bi-stable visual display or is implemented using e-paper technology.

In the article "A Comparison of Display Technologies for E-Books", Doane discloses on page 4 that bistable displays are "particularly attractive for the e-book because the display holds the image in memory without any applied power while the reader is viewing the page. Power is applied only when the e-book is paged or updated to display a new image." Doane further teaches, "This is a tremendous energy saving and a dramatic improvement on the operating time of a battery." Also note on page 1 that Doane's article focuses on displays for e-

books, or "electronic display media that begin to match the essential qualities of paper." This is understood to be e-paper.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Oliwa in view of Branson by having the visual display be a bi-stable visual display, implemented using e-paper technology, as suggested by Doane. One would have been motivated to make such a change based on the teaching of Doane that such a display causes "a tremendous energy saving and a dramatic improvement on the operating time of a battery."

25. In regard to claim 21, see rejection of claims 8 and 9. Note that Doane discloses, "Power is applied only when the e-book is paged or updated to display a new image", and "the display holds the image in memory without any applied power". Thus, the bi-stable display can display uploaded information without power requirements.

26. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliwa et al. 4,856,088 in view of Branson 2003/0071832 A1 as applied to claim 1 above, and further in view of Morrison et al. 2002/0154382 A1.

In regard to claims 14 and 15, Oliwa in view of Branson discloses an invention similar to that which is disclosed in claims 14 and 15. Oliwa in view of Branson does not disclose that the visual display is at least partially transparent and includes a transparent shutter layer.

Morrison discloses an invention in which a visual display is transparent with a transparent shutter layer. See paragraphs [0029], [0034] and [0035], disclosing a nanoparticle or nanoparticle-containing layer. Further see paragraph [0037], disclosing, "the nanoparticles appear transparent to the eye" and further teaching, "Because one of the states of the nanoparticles is transparent, such a display of the present invention functioning as a light valve or shutter could be used in conjunction with any known type of electro-optic medium to increase the number of display states which can be obtained from each pixel of the electro-optic medium."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Oliwa in view of Branson by having the visual display be at least partially transparent, including a transparent shutter layer, as in the invention of Morrison. One would have been motivated to make such a change based on the teaching of Morrison that such a display "could be used in conjunction with any known type of electro-optic medium to increase the number of display states which can be obtained from each pixel of the electro-optic medium."

Double Patenting

27. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164

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USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

28. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 10 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 10 of the copending application disclose all elements of claim 1 of the immediate application with the differences between the claims being a matter of breadth of the claim limitations and both sets of claims are effectively directed to the same invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

29. Claim 2 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 and 10 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 9 and 10 of the copending application disclose a display that is flexible and expandable, which could be folded or rolled to facilitate storage in a compact state, as in claim 2 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

30. Claim 3 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 10 of the copending application discloses an expandable display and an expandable display can also be retracted to store the display, as in claim 3 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

31. Claim 5 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 13 of the copending application discloses a wired communication connection between the display and computing device, which is a first connection housing communication port attached to a processing unit that mates with a second connection housing communication port attached to the visual display, as in claim 5 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

32. Claim 7 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-3 of the copending application disclose all elements of claim 1 of the immediate application. Claim 1 of the copending application discloses that the visual display unit displays while the visual display unit is separated from the processing unit and claims 2-3 disclose that the visual display unit displays data uploaded from the processing unit.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

33. Claims 8 and 9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/085924 in view of "A Comparison of Display Technologies for E-Books" by Dr. J. William Doane.

In regard to claims 8 and 9, claim 1 of the copending application discloses an invention similar to that which is disclosed in claims 8 and 9. Claim 1 of the copending application does not disclose that the visual display unit includes a bi-stable visual display or is implemented using e-paper technology.

In the article "A Comparison of Display Technologies for E-Books", Doane discloses on page 4 that bistable displays are "particularly attractive for the e-book because the display holds the image in memory without any applied power

while the reader is viewing the page. Power is applied only when the e-book is paged or updated to display a new image." Doane further teaches, "This is a tremendous energy saving and a dramatic improvement on the operating time of a battery." Also note on page 1 that Doane's article focuses on displays for e-books, or "electronic display media that begin to match the essential qualities of paper." This is understood to be e-paper.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of claim 1 of the copending application by having the visual display be a bi-stable visual display, implemented using e-paper technology, as suggested by Doane. One would have been motivated to make such a change based on the teaching of Doane that such a display causes "a tremendous energy saving and a dramatic improvement on the operating time of a battery."

This is a provisional obviousness-type double patenting rejection.

34. Claim 10 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the copending application discloses all elements of claim 10 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

35. Claim 11 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2 and 3 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2 and 3 of the copending application disclose all elements of claim 10 of the immediate application. It is understood that the processing unit of claim 2 of the copending application is a microprocessor as it is sized for a handheld computing device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

36. Claim 13 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 12 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 12 of the copending application disclose all elements of claim 13 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

37. Claims 14 and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/085,924 in view of Morrison et al. 2002/0154382 A1.

In regard to claims 14 and 15, claim 1 of the copending application discloses an invention similar to that which is disclosed in claims 14 and 15. Claim 1 of the copending application does not disclose that the visual display is at least partially transparent and includes a transparent shutter layer.

Morrison discloses an invention in which a visual display is transparent with a transparent shutter layer. See paragraphs [0029], [0034] and [0035], disclosing a nanoparticle or nanoparticle-containing layer. Further see paragraph [0037], disclosing, "the nanoparticles appear transparent to the eye" and further teaching, "Because one of the states of the nanoparticles is transparent, such a display of the present invention functioning as a light valve or shutter could be used in conjunction with any known type of electro-optic medium to increase the number of display states which can be obtained from each pixel of the electro-optic medium."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of claim 1 of the copending application by having the visual display be at least partially transparent, including a transparent shutter layer, as in the invention of Morrison. One would have been motivated to make such a change based on the teaching of Morrison that such a display "could be used in conjunction with any known type of electro-optic medium to increase the number of display states which can be obtained from each pixel of the electro-optic medium."

This is a provisional obviousness-type double patenting rejection.

38. Claim 16 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and 10 of copending Application No. 10/085,924. Although the conflicting claims are not identical, they are not patentably distinct from each other because all elements of claim 16 of the immediate application are disclosed in claims 1, 2 and 10 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

39. Claim 17 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 10/085,924. Although the conflicting claims are not identical, they are not patentably distinct from each other because all elements of claim 17 of the immediate application are disclosed in claim 2 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

40. Claim 18 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3 and 4 of copending Application No. 10/085,924. Although the conflicting claims are not identical, they are not patentably distinct from each other because all elements of claim 18 of the immediate application are disclosed in claims 3 and 4 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

41. Claims 20 and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/085,924. Although the conflicting claims are not identical, they are not patentably distinct from each other because all elements of claims 20 and 22 of the immediate application are disclosed in claim 1 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

42. Claim 21 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/085924 in view of "A Comparison of Display Technologies for E-Books" by Dr. J. William Doane.

In regard to claim 21, claim 1 of the copending application discloses an invention similar to that which is disclosed in claim 21. Claim 1 of the copending application does not disclose that the visual display unit includes a bi-stable visual display that can display uploaded information without power requirements.

In the article "A Comparison of Display Technologies for E-Books", Doane discloses on page 4 that bistable displays are "particularly attractive for the e-book because the display holds the image in memory without any applied power while the reader is viewing the page. Power is applied only when the e-book is

paged or updated to display a new image.” Doane further teaches, “This is a tremendous energy saving and a dramatic improvement on the operating time of a battery.”

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of claim 1 of the copending application by having the visual display be a bi-stable visual display that can display uploaded information without power requirements, as suggested by Doane. One would have been motivated to make such a change based on the teaching of Doane that such a display causes “a tremendous energy saving and a dramatic improvement on the operating time of a battery.”

This is a provisional obviousness-type double patenting rejection.

43. Claim 23 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 and 10 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 9 and 10 of the copending application disclose a display that is flexible and expandable, which could be folded or rolled to facilitate storage in a compact state, as in claim 23 of the immediate application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

44. Claim 26 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and

10 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 2 and 10 of the copending application discloses all elements of claim 26 of the immediate application. It is understood that the processing unit of claim 2 of the copending application is a microprocessor as it is sized for a handheld computing device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

45. Claim 28 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10 and 11 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 10 and 11 of the copending application disclose all elements of claim 28 of the immediate application. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

46. Claim 29 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 11 and 14 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 10, 11 and 14 of the copending application disclose all elements of claim 28 of the immediate application. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

47. Claim 30 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 12 of copending Application No. 10/085924. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 12 of the copending application disclose all elements of claim 30 of the immediate application. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

48. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang 2002/0155864 discloses a handheld computing device with a detachable display.

Failla et al. 5,128662 discloses a display that is expandable and flexible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laurel E LeFlore whose telephone number is (703) 305-8627. The examiner can normally be reached on Monday-Friday 8-4:30.

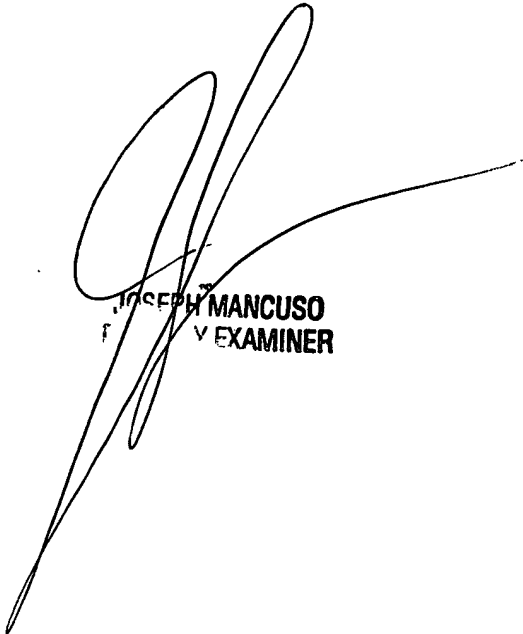
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (703) 305-3885. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2673

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LEL
22 March 2004



JOSEPH MANCUSO
EXAMINER